# Panasonic
ideas for life

# AG-DVX100B
Mini-DV Camera-Recorder (PAL)


LEICA DICOMAR

Mini DV Digital Video Cassette

# An Evolution in DV for Professionals

## New AG-DVX100B – World's First DV Camera-Recorder to Support Multi-Camera Recording

Already used for film and TV program production as well as news gathering, Panasonic's DVX100 series has now evolved further with the AG-DVX100B. The AG-DVX100B debuts as the industry's first DV camera-recorder to allow camera-to-camera time-code synchro and user-settable file transfer. This allows the AG-DVX100B to be used for simultaneous multi-camera recording techniques often used in video production. Additionally the new model offers remote focus and iris control for easier operation when mounted on a jib arm or tripod. The Black Sapphire AG-DVX100B offers the acclaimed performance and multiple functions of previous high-end DV camera-recorders models. In addition to superior image quality, high sensitivity, 25P Cinema mode and manual operation, it has the specifications needed for full-fledged professional video production.

**New AG-DVX100B Functions (compared with the AG-DVX100A)**

* Allows synchronous setting of time-code values in multiple cameras
* User-settable files can be copied from camera to camera
* Remote control of focus and iris (wired)
* EVF and LCD can display images in 16:9 letter-box format


3CCD
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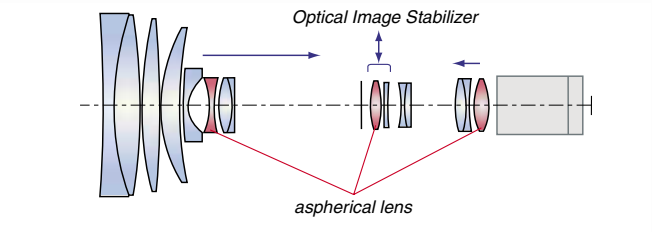
# Superior Image Rendering

**Higher image quality and sensitivity than others in its class. 25P native progressive mode lets you produce content with exceptional quality.**

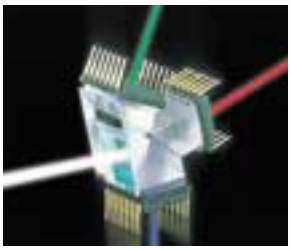
**Superior Image Rendering with the Leica Dicomar™ Lens, Plus OIS**

The Leica Dicomar lens featured in the AG-DVX100B incorporates Leica optical technology and know-how. Use of low-dispersion glass reduces colour aberration and increases resolution, while a multi-coating process minimizes flare and ghosting. The results are sharp, crisp, beautifully rendered images with delicate nuances and exceptional shading. The lens system features 15 lens elements in 11 groups, including three aspherical lenses. Panasonic's advanced OIS (Optical Image Stabilizer) drastically cuts the blurring caused by hand shake. Optical processing with an automatic correction function helps assure consistently clear, sharp images.

*Leica and Dicomar are registered trademarks of Leica Microsystems IR GmbH.




## 470,000-Pixel, 3CCD Image System Provides F11 Sensitivity for Superior Image Quality



Panasonic designed the AG-DVX100B to deliver the highest sensitivity and picture quality in its class. At its heart is a 3CCD RGB system comprising three 1/3-inch, 470,000-pixel progressive CCDs developed especially for broadcast and professional applications. The new on-chip lens design achieves high F11 sensitivity, allowing the AG-DVX100B to record in light as dim as below three lux, for example, in nighttime news gathering. Picture quality is outstanding, with a high S/N ratio that means less noise in darker parts of the image and low smear that allows shooting in sunlight or under bright spotlights.

## High-Sensitivity Slow Shutter (in cumulative) Function

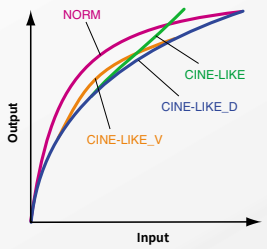
The slow shutter function uses image accumulation to enable shutter speeds with frame rates reduced by half or more. You get the ultra-high sensitivity needed for nighttime shooting without illumination, as well as dramatic frame-by-frame or soft focus effects.

## High Image Quality with 12-Bit A/D Conversion

The AG-DVX100B features an A/D converter that uses the same 12-bit processing as broadcast camera-recorders. Precisely digitizing the gradation and colours captured by the progressive CCD, this A/D converter supports gamma switching and other fine downstream image adjustments — one of the keys to achieving rich image expression.

## RGB Gamma Processor Provides Rich, Cine-Like Tones

Panasonic has greatly expanded the expressive capability of the DV camera by creating unique gamma functions such as Cine-Like gamma curves, which produce images strikingly similar in tone to film images. For each of the RGB signals, the gamma curve settings are processed immediately upstream from the digital signal processing circuit. This helps achieve outstanding image quality. The AG-DVX100B continues with the tradition of the seven gamma curves pioneered with the DVX100A..




*Gamma Curve image*


| | |
|---|---|
| CINE-LIKE | Film-like images |
| CINE-LIKE-D | The Cine-Like mode shifted to prioritize dynamic range |
| CINE-LIKE-V | The Cine-Like mode shifted to prioritize contrast |
| LOW | Images with strong black contrast |
| B.PRESS | Images with even stronger black contrast |
| NORM | Standard video gamma |
| HIGH | Bright images with enhanced gradation in dark portions and soft contrast |

## High-Quality, Native Progressive 25p Mode

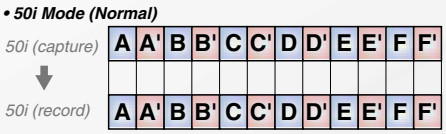
The AG-DVX100B provides two shooting modes: 25p (25 fps, progressive) and standard 50i (50 fps, interlace). In 25p mode, the AG-DVX100B gives images and motions a film-like effect — they look very much like the images and motions of conventional 24fps film. Thanks to its progressive CCD, the AG-DVX100B creates native progressive images with outstanding vertical resolution — unlike images produced using conventional electronic interpolation. With its high mobility and low costs, the AG-DVX100B is the ideal tool for producing indies, shorts, or streaming video.

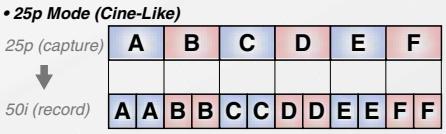
*25p image*
*(25 progressive frames per second)*

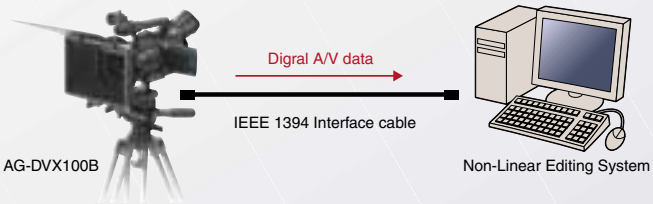
*50i image*
*(50 interlace fields per second)*

## 25p Shooting — 50i Recording

The 25p images are split into two frames and recorded onto tape in the standard 50i TV format. They can be played back with an ordinary DV VTR and TV monitor and edited with a DV system. With 25p mode and cine-like gamma, the AG-DVX100B lets you produce video images that closely replicate film images, with a depth not previously possible.




## Improved Colour Reproduction and Advanced Image Adjustments Built-In

- Optimized colour separation optics help provide true-to-life colours
- "Enriched" Matrix setting offers more saturated colours
- Adjustable V detail level (edge correction in vertical direction), H/V detail balance, and detail coring (detail noise removal)
- Knee point (luminance compression) settings – Auto, Low, Mid and High

## 25p Shooting Functions for Professionals

- Focus assist*
- Gain up (+12 dB max.)
- Colour bar display and output

*Auto focus in 25p mode requires slightly more focusing time than in 50i mode.


# Outstanding Mobility

**The AG-DVX100B's Manual/auto operation is a very useful tool for professionals. It offers high reliability to support your camera work.**

**Wide-Angle/Zoom Lens Answers Professional Needs**
The AG-DVX100B's zoom lens extends all the way to 4.5 mm (equivalent to 32.5mm on a 35mm lens), covering the full wide-angle range needed in most broadcast and professional shooting. It gives you ample range for close-ups, recording in small rooms, and self-recorded interviews. There's no need to carry around a bulky wide-angle conversion lens. And with a minimum object distance (MOD) of approximately 0.6 meter in telephoto mode, the AG-DVX100B has the maneuverability of a handheld camera.

**Fast, Smooth Cam-Driven Manual Zoom**
The cam-driven (mechanical) manual zoom ring provides the same smooth, easy zooming as cameras with interchangeable lenses. Its direct operation gives you fast, precise zooming control. You'll also notice the AG-DVX100B's improved operating feel.
When you turn the zoom ring, you experience the familiar steady resistance as with familiar 35mm lenses.
The AG-DVX100B is also equipped with a servo-driven zoom that allows slow zooming at a speed of approximately 50% slower than its predecessor. Slowest zoom has been reduced to a dramatic 30 seconds from 20 seconds.

## Focus Assist

Enjoy quick, sharp focusing manually or automatically. In auto mode, you get the quick, sharp focusing needed in news gathering or when shooting at a high or low angle.
When set to infinity, the focal distance is immediately prepared for the next manual focus. When in manual mode, pressing the Push Auto button temporarily activates auto focus.
Macro Focus can be achieved either Manually or Automatically when the zoom lens is in the wide angle position.

## Three User Buttons for Customized Operation

The AG-DVX100B provides three user buttons, each of which can be assigned any one of the 11 functions described below.
The assigned functions can then be accessed at the touch of a button. This lets you customize the AG-DVX100B for quicker, easier, more versatile operation.

| Assignable Functions | |
|---|---|
| COLOUR BAR | Display/hide the colour bar |
| SPOTLIGHT | Auto iris spotlight correction ON/OFF |
| BACKLIGHT | Auto iris backlight correction ON/OFF |
| BLACKFADE | Fade out to a black screen (linked with audio) |
| WHITEFADE | Fade out to a white screen (linked with audio) |
| MODECHECK | Display camera settings in viewfinder/monitor |
| ATW | Auto tracking white balance function ON/OFF |
| ATWLOCK | Lock/unlock white balance in ATW operation |
| GAIN 18dB | Switch the gain to +18 dB |
| INDEX | Write the index signal |
| SLOW SHUT | Slow shutter mode ON/OFF |

## Scene File Dial Provides Quick, Easy Setup

Set this dial for any particular shooting conditions, and later you can retrieve the settings instantly. Six preset files are provided (F1 to F6, described below); you can change any of the six file names and their settings as desired. The AG-DVX100B also introduces a new design in which a rib protects the scene file dial to prevent unintentional file changes.


| File | Description | |
|---|---|---|
| F1: | — | Standard settings |
| F2: | FLUO. | Indoor shooting under fluorescent lights |
| F3: | SPARK | Highlighting subjects at receptions, dinners, and other gatherings |
| F4: | B-STR | Enhanced gradations of luminance in low light scenes |
| F5: | SCENE 25P | 25p mode + Cine-Like-V gamma |
| F6: | SCENE CINE | 25p mode + Cine-Like-D gamma |

## 3-Position White Balance with Auto Tracking White Function

One press of the AWB button is all it takes to adjust the white balance and black balance. There are three white balance values to select from: one that's preset, and two (A, B) that you can set and save in memory. The auto tracking white balance (ATW) function can also be assigned to any of the three positions. The ATW mode supports fast, active shooting by adjusting the white balance in real-time as lighting conditions change.

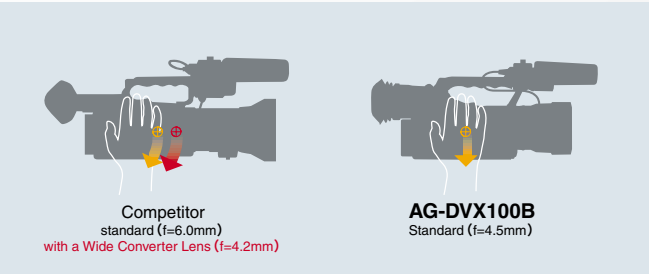
## Auto Button for Instant, Easy Shooting

Just press the Auto button to turn on Auto Iris, Auto Gain, Auto Tracking White Balance, and Auto Focus — and you are quickly ready to shoot. You can also customize the Auto button by removing functions and setting the gain to any value desired.
With this new Auto function, the AG-DVX100B gives you the best of both worlds — the speed and ease of automatic operation, and the precision of manual control.

## Lightweight Design with Balanced Grip

The AG-DVX100B introduces a new design that ends the contradiction between a compact, lightweight body and a stable, secure hold.
The center of balance is located precisely at the handgrip. Because there's no need for a wide-angle conversion lens, the weight balance is ideal for comfortable shooting. The AG-DVX100B's short body and light weight — it weighs just 1.9 kg in operating condition* — means free, easy maneuverability. Plus, the low-center-of-gravity design and new skeleton lens hood greatly improve forward vision.

*Camera-recorder with DV cassette tape and supplied battery.




## Magnesium Alloy Chassis – The Rugged Durability Professionals Need

The AG-DVX100B features the same magnesium alloy diecast chassis as our DVCPRO broadcast models. This tough, rigid unit protects the high-precision mechanism, giving the AG-DVX100B outstanding reliability and durability. Built for professionals, the AG-DVX100B stands up to the bumps and jolts that occur in the field.

## Automatic Head Cleaning

The AG-DVX100B provides the same head cleaning function as our DVCPRO models. The white roller pad positioned to the right of the head cylinder cleans the head each time you load a tape, helping to minimize dropouts and head clogging.

# System Flexibility

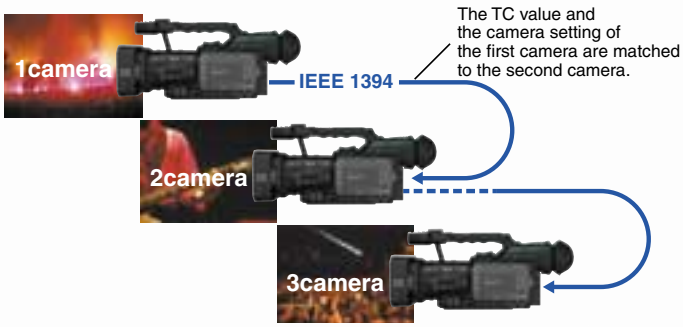
**Industry's first DV camera-recorder to support multi-camera recording. Recording function and specifications designed to meet high-level professional needs.**

**First DV camera-recorder with time-code synchro function – Supports multi-angle recording with multiple cameras**

Connecting two AG-DVX100B units together with a DV cable (IEEE1394) allows synchronous time-code setting, which then enables time-code-locked editing of clips recorded with multiple camera-recorders for "TC synchro editing." The AG-DVX100B is the industry's first DV camera-recorder with this function, which was previously available only on bigger, bulkier camera-recorders. The built-in SMPTE time-code generator/reader lets you select, and preset Free Run/Rec Run modes. User Bits are also provided, letting you record your choice of date, time, frame rate or user data.

**File Transfer Function**

New user file transfer function makes it easy to get uniform image quality from multiple camera-recorders. When two AG-DVX100B units are connected together with a DV cable(IEEE1394) you can transfer user files containing camera parameters to help match cameras on a multiple camera shoot. Additionally the Time Code value can be transferred as well making a common starting point for recording.




## New remote operation function – Controls zoom, Rec, focus and iris

The AG-DVX100B is equipped with terminals that allow remote control of focus and iris settings. You can combine these control functions with the conventional remote control functions (zoom, Rec start/stop) to create an easy-to-use remote control system for mounting to the handle section of a tripod or on a remote arm of a jib.

## XLR Audio Input with +48-V Phantom Power Supply

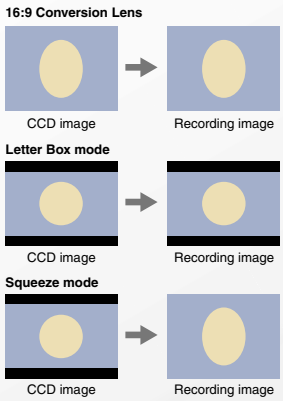
In addition to built-in stereo microphones, the AG-DVX100B is equipped with two XLR audio input terminals with a 48-V phantom power supply for broadcast use. The terminals are positioned low on the camera to minimize the possibility of the cables being snagged when a hand mic is in use. Both input 1 and input 2 can be switched between line and mic, and Audio is locked to the Video unlike consumer DV camcorders.

## Audio Dials and Flexible Input Selection

The AG-DVX100B has the same kind of level-adjustment dials as DVCPRO camera-recorders. This practical design incorporates professional operating features that have been refined over years of use on location. A switch lets you select built-in mic, input 1, or input 2 for the audio input of both left and right channels. Auto level control can be turned on and off, and the input mic level (–50 dB/–60 dB) can be selected from the menu.


## Three 16:9 Wide Modes, Including the New Squeeze Mode

The AG-DVX100B has three modes for shooting 16:9 wide images. Use the optional 16:9 conversion lens (AG-LA7200G, sold separately) to take full advantage of the higher image quality made possible by using all of the CCD pixels. With the standard lens*, you can record in letterbox mode or the newly added squeeze mode. This gives you extra flexibility when using the AG-DVX100B together with equipment from other manufacturers.




Activating the Aspect Ratio function on the LCD allows for a letter-box display for easier framing when shooting in Squeeze Mode or when using the Anamorphic lens.

*Vertical resolution with the standard lens is slightly lower than with the 16:9 conversion lens. However, when recording in progressive mode rather than interlace mode, the difference is barely perceptible.

## Large Electronic Viewfinder

The large viewfinder is easy to see through, even with your eye at a slight distance, and it tilts upward 100° for easy low-angle shots. The AG-DVX100B also adds a B/W display mode*, detail (PEAKING) function, and image adjustment menu.

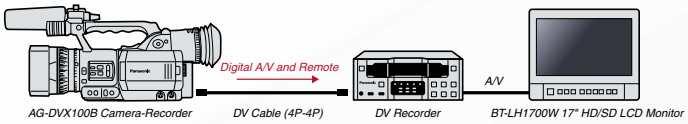
*With the same high resolution as the colour display

## 3.5" Colour LCD Monitor

The large 3.5" colour LCD monitor rotates 270°. This improves shooting flexibility by making it easier to monitor high-angle shots or self recordings. The display is bright, too, for easy viewing when monitoring images or selecting the menu settings. The higher resolution of the LCD and EVF display make the Peaking detail even more of an effective tool for quick and accurate focusing.

## External Backup with the IEEE 1394 Synchro Lock Function

The AG-DVX100B comes equipped with an IEEE 1394-compliant 4-pin DV terminal that makes it easy to upload data to a PC and dub onto a DV recorder. This terminal also features a new synchro lock function that allows the AG-DVX100B to remotely start and stop an external DV device connected to it via a DV cable. Three recording modes help protect against mistakes: record only onto the external recorder, record onto both the AG-DVX100B and the external recorder, begin external recording when the AG-DVX100B tape ends.




## One-Shot Recording and Other Recording Functions

- **One-Shot mode:** for animation film making — that records for the set number of seconds each time the Start/Stop button is pressed.
- **Audio dubbing:** Allows voice-over recording on a recorded tape via an external mic.
- **Line recording:** Lets you record a video signal input from an external source.

## Recessed Trigger and Zoom Control on Upper Handle Grip

In addition to the lens grip, the upper part of the handle grip contains both the Rec Start/Stop button and a lens zoom control. This design assures easy shooting even at low angles or when using a tripod. The zoom speed can be set to any of three speed levels or off.

## Gain, Iris, Shutter Speed, ND Filter

- **Gain:** Increases gain up to 18 dB. The selector has three positions: L is fixed at 0 dB; M and H can be set to 0, +3, +6, +9, or +12 dB. +18dB can also be quickly accessed by the use of USER 1, 2 or 3 button.
- **Iris:** Allows smooth, gradual manual or auto iris adjustment. The iris dial allows adjustment even when in Auto mode. Either backlight compensation or spotlight compensation can be added to the auto iris adjustment.
- **Shutter:** Maximum shutter speed is 1/2,000 sec. When a computer display is being recorded, a synchro scan function allows the shutter speed to be matched to the sync of the monitor to help eliminate the moving scan line.
- **ND filter:** Two ND filters (1/8 ND, 1/64 ND) are built-in and easily accessible.

## Support Functions for Greater Convenience

- **End search:** Automatically searches for the last recorded portion of the tape. Convenient when preparing to start the next recording.
- **Mode check:** Displays a list of the camera settings on the viewfinder and monitor. Makes it easy to check settings before recording.
- **2-Pattern zebra:** Displays an overexposure warning on the viewfinder and monitor. Select any two levels from among 80%, 85%, 90%, 95%, 100% and 105%.
- **Rec check:** Plays back the last portion of a recorded passage for easy checking.
- **Index:** Enables marking while recording. Convenient for searching after recording.
- **Tally lamps:** Provided on the unit's front and rear menu switchable.
- Reversible eye cup for left and right eyed shooters.
- Built-in colour bars useful for setup.

Switches and connectors are arranged to allow easy use of the AG-DVX100B's many functions, and a host of bundled accessories and available options prepare it for action just about anywhere.


*Top view (handle and grip)*

*Sub-panel (with LCD monitor opened)*


*Side view (with LCD monitor closed)*

## *AG-DVX100B Bundled Standard Accessories*


## *Optional Accessories*

**AG-MC100G** XLR microphone

**AG-MC700P** XLR microphone


**AG-LA7200G** 16:9 Anamorphic Lens
**AG-LW7208G** Wide conversion lens


**CGR-D16S** Battery Pack (1.6 Ah)
**CGP-D28S** Battery Pack (2.8 Ah)
**CGA-D54S** Battery Pack (5.4 Ah)


*Front view (with lens hood removed)*

*Rear view (with terminal cover removed)*


*Side view (with terminal cover removed)*

**AG-B15** AC adapter kit

IEEE 1394 Interface cable

**AG-SC100G** Soft carry case

**AY-DVM63PQ**
Professional Series Tape

**AY-DVM63MQ**
Master Series Tape

**AY-DVM63AMQ**
Advanced Master Quality Series Tape

*Please do not use 80 minutes miniDV cassette tapes

**AY-DVMCL**
Cleaning tape

**QR-DVX** AntonBauer battery adapter

**AG-HT100G** Hard carry case

**BT-LH1700W** 17" HD/SD LCD Monitor

## AG-DVX100B Specifications

### [GENERAL]

| | |
|---|---|
| Supply Voltage: | DC 7.2/7.9 V |
| Power Consumption: | 6.8 W (when viewfinder is used)<br>7.2 W (when LCD monitor is used)<br>9.8 W (max.) |
| Operating Temperature: | 0°C to +40°C |
| Operating Humidity: | 10% to 85% (no condensation) |
| Weight: | 1.7 kg<br>1.9 kg with battery and cassette |
| Dimensions (WxHxD): | 139 x 160 x 364 mm |

### [CAMERA]

| | |
|---|---|
| Pick-up Device: | 1/3-inch interline transfer type CCD x 3<br>(progressive modes supported) |
| Picture Elements: | Total: 470,000 pixels<br>Effective: 440,000 pixels (horizontal pixel shift system) |
| Lens: | Leica DICOMAR lens with optical image stabilizer, motorized/manual mode switching, 10x zoom<br>F 1.6 (f = 4.5 to 45 mm) (35 mm equivalent: 32.5 to 325 mm) |
| Filter Diameter: | 72 mm |
| Optical Colour Separation: | Prism system |
| Optical Filter: | ND Filters, 1/8ND, 1/64ND |
| Shooting Mode: | 50i (625i) interlaced fields<br>Progressive mode (25P) |
| Gain Selection: | 50i mode: 0, +3, +6, +9, +12, +18 dB<br>25P mode: 0,+3,+6,+9,+12 dB<br>(0dB fixed, when slow shutter mode ) |
| Preset Shutter Speeds: | 50i mode: 1/50 (OFF), 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000 sec.<br>25P mode: 1/25, 1/50 (OFF), 1/60, 1/120, 1/250, 1/500,1/1000 sec. |
| Synchro Scan Shutter Speeds: | 50i mode: 1/50.2 to 1/248.0 sec.<br>25P mode: 1/25.1 to 1/248.0 sec. |
| Slow Shutter Speeds: | 50i mode: 1/3, 1/6, 1/12, 1/25 sec.<br>25P mode: 1/3, 1/6, 1/12 sec. |
| Sensitivity: | F11.0 at 2000 lux |
| Minimum luminance: | 3 lux (F 1.6, 18 dB gain, 50 IRE video output) |

### [VTR]

| | |
|---|---|
| Tape Used: | 6.35 mm wide metal tape (mini DV cassette) |
| Recorded Audio Signals: | PCM digital recording<br>16 bits: 48 kHz/2 channels, 12 bits: 32 kHz/4 channels |
| Recording Tracks: | Digital video, audio signals: helical track<br>Time code: helical track (sub-code area) |
| Tape Speed: | SP mode: 18.831 mm/sec., LP mode: 12.568 mm/sec. |
| Recording Time: | SP mode: 60 minutes,<br>LP mode: 90 minutes (when AY-DVM63 is used) |
| FF/Rew Time: | Approx. 140 sec. (when AY-DVM63 is used) |

### [VIDEO]

| | |
|---|---|
| Sampling Frequencies: | Y: 13.5 MHz, PB/PR: 6.75 MHz |
| Quantizing: | 8 bits |
| Video Compression System: | DCT + variable length code |
| Error Correction: | Reed-Solomon product code |

### [AUDIO]

| | |
|---|---|
| Sampling Frequency: | 48 kHz/32 kHz |
| Quantizing: | 16 bits/12 bits |
| Frequency Characteristics: | 20 Hz to 20 kHz |
| Wow & Flutter: | Below measurable limits |

### [CONNECTORS]

| | |
|---|---|
| VIDEO IN/OUT: | RCA x 1, analogue composite input/output, 1.0 Vp-p, 75Ω<br>(input/output automatically switched) |
| S-VIDEO IN/OUT: | DIN 4pin x 1, Y/C separate signal input/output,<br>Y: 1.0 Vp-p, C: 0.3 Vp-p, 75Ω<br>(input/output automatically switched) |
| AUDIO IN/OUT: | RCA x 2 (CH1, CH2)<br>Input: 316 mV, high impedance<br>Output: 316 mV, 600Ω<br>(input/output automatically switched) |
| DV: | 4-pin, digital input/output, IEEE 1394 standard |
| MIC/LINE INPUT: | XLR (3 pins) x 2 (CH1, CH2)<br>LINE/MIC switching, high impedance<br>LINE: 0 dBu, MIC: –50 dBu/–60 dBu (menu selection) |
| DC INPUT: | 7.9 V |
| PHONES: | Stereo (3.5 mm diameter), 100Ω |
| CAM REMOTE: | Zoom S/S: Mini jack (2.5 mm diameter)<br>Focus IRIS: Mini jack (2.5 mm diameter) |

### [ON-BOARD EQUIPMENT]

| | |
|---|---|
| LCD Monitor: | 3.5-inch LCD colour monitor, 210,000 pixels |
| Viewfinder: | 0.44-inch LCD colour viewfinder, 235,000 pixels |
| Internal Microphone: | Stereo microphone |
| Internal Speaker: | 28 mm round shape, volume – or + |

### [AC ADAPTER]

| | |
|---|---|
| Power Source: | 110/120/220/240 V AC, 50/60 Hz |
| Power Consumption: | 18 W |
| Weight: | 0.16 kg |
| Dimensions (WxHxD): | 70 x 44.5 x 116 mm |

*The specifications given above were measured by playing back tapes recorded by the AG-DVX100B on standard VTRs.
Weight and dimensions shown are approximate.
Specifications are subject to change without notice.


**Panasonic**

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**[Countries and Regions]**

| | | | | | |
|---|---|---|---|---|---|
| Argentina | +54 1 308 1610 | Kuwait | +965 481 2123 | Sweden | +46 (8) 680 26 41 |
| Australia | +61 2 9887 6222 | Lebanon | +961 1 216827 | Switzerland | +41 (0)41 259 96 32 |
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